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## VIA ELECTRONIC FILING

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Chairman Kevin J. Martin Commissioner Jonathan S. Adelstein Commissioner Michael J. Copps Commissioner Robert M. McDowell Commissioner Deborah Taylor Tate Federal Communications Commission 445 12th Street, SW Washington, DC 20554



Re: Ex Parte Comments of New England Sports Network (NESN)

Introduction of Unlicensed Devices in the "White Spaces" ET Docket No. 04-186

Dear Chairman Martin and Commissioners Adelstein, Copps, McDowell and Tate:

NESN is a regional sports network located in Watertown, Massachusetts that is passionately focused on delivering Boston Red Sox, Boston Bruins and other sports programming of unparalleled breadth and quality to sports fans throughout the New England region. Sports programming such as what we are actively engaged in producing on an almost daily basis relies extensively on wireless microphones and related audio equipment in its production and distribution. In addition, these wireless communications systems have become an important infrastructure element in the conduct of the games themselves. Any interference caused by new devices operating in the "white spaces" spectrum will seriously impair NESN's sports event programming and deny the region's public full enjoyment of their passion for sports. As noted below, we urge the Commission to carefully consider the impact on existing wireless microphone users and other wireless communications devices as it moves forward to resolve issues in this proceeding. The overwhelming majority of wireless microphones, wireless video assist devices and related audio equipment use the TV "white space" channels for communications.

Wireless microphones, including intercoms, are used extensively by television and radio journalists to conduct event-site interviews with athletes and coaches. For many sports events, these frequencies are used by coaches to communicate with each other or their athletes, and even by officials to announce penalties and calls. In fact, at some large events, like the Super Bowl, BCS College Football Championship, the Daytona 500, or the NBA Finals, hundreds of wireless microphones may be used at a single venue. Today, sports leagues and programmers already face a difficult challenge to find sufficient available wireless spectrum to support their events. In most major metropolitan areas where many sporting events are held, the TV spectrum is not actually "white" or vacant but is, in fact, used to support these events.



Typically, major sporting events require significant advance planning and extensive professional frequency coordination of wireless microphones to ensure that the players, coaches, officials, broadcasters, and fans have the high-quality audio needed to make the event a success. Wireless microphones are sensitive high-end professional equipment and any radio interference could cause a loss of audio or quickly degrade audio quality beyond tolerable limits. Such interference would have a devastating effect on program producers, organizers, teams, coaches, and live spectators at an event as well as the millions of viewers watching on television. Imagine the public complaints and outcry from fans if audio was lost during a decisive call or key play during a televised playoff or national championship.

As a first step towards ensuring protection for existing services, we urge the Commission to limit its action in this proceeding to "fixed" TV band devices for rural broadband services. The location of these fixed devices should be known to incumbent users. The radiofrequency environment in the TV channels is already difficult for frequency coordinators and producers and to add millions of portable new TV band radio devices in the same spectrum would make interference conditions intolerable. New portable TV band devices should not be permitted to operate on the so-called "white spaces."

We also strongly encourage the Commission to conduct both laboratory and field testing of the ability of all devices to protect wireless microphones and related audio equipment. It is particularly important to conduct field tests that assess the interference cases in real-world conditions. Real world testing will allow the Commission to determine whether proposed interference solutions will protect all incumbent devices and services. The advocates of new devices in the TV frequencies bear the burden of demonstrating that no interference will occur to existing operations and should be prepared to demonstrate that their devices detect and protect all incumbents, including wireless microphones.

We urge the Commission to adopt effective interference avoidance measures. In particular, we support requirements that would prohibit these new TV band devices from operating in spectrum adjacent to assigned TV channels and in some modest number of channels in rural areas. We also support the adoption of other measures that may be necessary to meaningfully protect wireless microphone operations from interference in super-scale venues such as major televised sporting events. New TV band devices will need to be located in areas where they will not interfere with incumbent users. A system based on using geolocation to locate fixed base stations in areas where there will be no interference appears to be the best approach.

Sports leagues and organizations, owners, teams, players, broadcasters, sportscasters, webcasters, and consumer technology providers all share an interest in the development of technical and regulatory requirements that prevent harm to sports production and programming distribution. This shared interest is driven by the demand of millions of American sports fans that view live and broadcast events and expect high-quality audio as part of the overall consumer sports experience. Wireless microphone equipment plays a crucial role in delivering that sports experience to American consumers.

It is essential that the Commission not allow new portable devices to operate in the TV spectrum. Further, we urge the Commission to designate certain spectrum "off limits" to new TV band devices, adopt technical solutions (such as those proposed by the IEEE 802.22) to prevent interference at super-scale sporting events, use geolocation to insure that fixed devices do not cause interference, and test all technical solutions under consideration to assess whether they will, in fact, protect wireless microphones under real-world conditions.

Sincerely,

Tom Werner

Chairman

**NESN** 

Sean P. McGra President

NESN